The Role of Beliefs in Purchase Decisions: A Look at Green Purchase Behavior and Altruism

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ABSTRACT

This research study is focused on understanding consumer behavior in relation to the purchase of environmentally friendly products. Using the Theory of Planned Behavior as a guide, it seeks to uncover the salient beliefs regarding purchasing environmentally friendly products as well as explore the role that altruism plays in green product purchases. Findings of this multi-stage study uncover multiple beliefs about environmentally friendly products, support the Theory of Planned Behavior in regards to green purchase behavioral intent, and show a statistically significant indirect link between altruism and green purchase behavior.

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CHAPTER 1: INTRODUCTION TO THE STUDY

"There's a lot of cynicism and distrust in the world of big institutions, and companies really need to share with people what they value, what they care about."

–Marc Pritchard, Procter & Gamble's Global Brand-Building Officer, Association of National Advertisers Convention, 2010 (Schultz, Neff & Pollack, J 2010)

Overview

The marketplace is overripe with choices. Being authentic and building consumer trust have never been more important. Over the past few years, business leaders have been thinking about social problems and how social problems can fit into their business models. The phenomenon of "pro-social" or "purpose" marketing has become popular with companies across the nation including Panera Bread Company, Coca-Cola, Toyota, Kashi, Whole Foods Market, and Procter & Gamble to name a few. This type of marketing professes company beliefs and values to entice consumers to explore and experience the product or service being advertised. Finding and making an authentic connection with consumers through value expression is key to building not only a loyal brand community but a community of brand advocates.

According to Erin Nelson, former CMO of Dell, "Purpose isn't just good for the soul, it's actually really good for the bottom line" (Schultz et al., 2010). As a growing number of consumers claim that what a company stands for influences their purchase decision (Elliot, 2013), brands that have authentic meaning have the potential to become quite profitable.

Altruism, the practice of concern for others, is a key value tied to social or purpose marketing. When it comes to building brand communities, how much stronger might a brand community be if altruistic values are inserted into the branding efforts?

This research study is focused on understanding consumer behavior in relation to social or purpose marketing. Using pro-environmental or "green" marketing as a strategic research site, this research is unique in that it looks beyond classic cause-related marketing research and explores the impact of underlying altruistic values via the incorporation of social issues into the product advertising space.

Many are concerned about the future, sustainability and ethical or mindful decision-making. This research considers the external issues brought into the buying process. Looking specifically at mindful decision-making and how consumers think and feel about sustainability—the creation and maintenance of conditions that support our natural environment and the common good—this research explores what motivates consumers to make purchases that benefit someone or something other than themselves.

Statement of the Problem

Considering that companies are spending millions of dollars launching organic and environmentally friendly product lines, and consumers are purchasing more and more of these products, the problem we face is the fact that we don't know why consumers are buying these green products. This research addresses this "why" and strives to develop a better understanding of what type of consumers have positive attitudes toward environmentally friendly products. Is it possible that consumers making green purchases have more in common than a simple desire to act in an environmentally friendly manner?

Could their purchase behavior and behavioral intent be tied to an expression of altruistic values or beliefs?

This leads to the formal research questions posed for this study which are RQ1: What are the salient beliefs regarding purchasing environmentally friendly products? And RQ2: When it comes to everyday buying behaviors, what role does altruism play?

Conceptual and Theoretical Framework

Altruism, as defined by Batson in *Altruism in Humans,* is "a desire to benefit someone else for his or her sake rather than one's own" (2011, p. 3). The term was first used in the early 1800s by French philosopher Auguste Comte to explain a "devotion to the interests of others as an action-guiding principle" (Paul, Miller, & Paul (eds), 1993, p. vii) and is a phenomenon still being researched and studied.

Overall, altruism has been most frequently conceptualized and defined through the rankings of various value statements, such as "I prefer working toward my own well-being than toward the well-being of others," or "It is important to me to help others" (Ferguson, Atsma, de Kort & Veldhuizen, 2012). It has also been defined or explained as identified emotions such as empathy (Batson, O'Quin, Fultz, Vanderplas & Isen, 1983). In addition, reasons given for attitudes or behaviors have been cited as helping to study and understand altruism. Reasons include showing concern for those less fortunate, expressing compassion, doing something for a cause that is important to him/her (Briggs, Peterson & Gregory, 2010), as well as considering something a moral obligation (Baron, 1999).

This research aims to not only improve upon these concepts and definitions, as the current definitions of altruism are strictly human-centric, but to venture into newer

territory by combining prior value research and knowledge with strongly established behavioral theories. Many of the current persuasive behavioral communication theories and models do not incorporate a value or belief structure into their explanations of attitude and behavior. Thus, this research will begin to explore the incorporation of values, specifically altruism, into some vested communication theories.

The conceptual model in mind for this research is inspired by the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and the Theory of Planned Behavior (Ajzen, 1985). The Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB) are similar in that they both seek to predict the potential for action or behavioral intent. TRA posits that attitudes toward a behavior along with subjective norms or the influence of people in one's social environment, lead to intention, which, in turn, leads to behavior (Fishbein & Ajzen, 1975). TPB, developed as a revision to TRA, goes a step further and incorporates behavioral control or one's perceived ease or difficulty in performing a behavior, as a contributing factor to intention, and eventually behavior (Ajzen, 1985).

The two theories taken together aid in the construction of the following conceptual model (Figure 1), which shows that in addition to attitudes, social norms and perceived control, personal values, specifically altruism, lead to beliefs, which affect attitudes, subjective norms, and perceived behavioral control, which then each contribute to green purchase behavioral intent. Altruism is considered a value, which is something that we think is important, while beliefs are what we think is true. Altruism, then, can lead to beliefs, which in turn, guide actions.

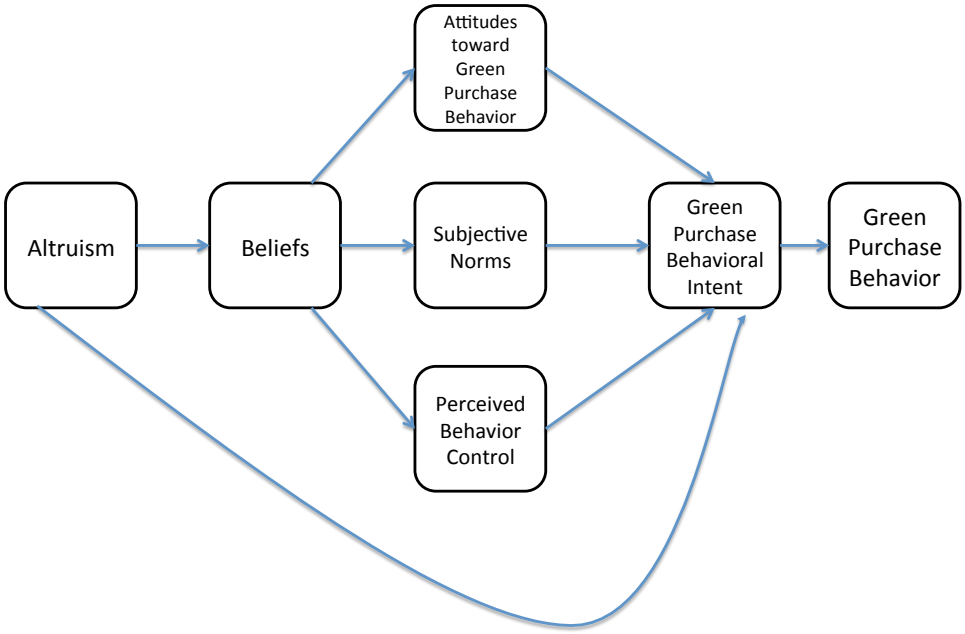


Figure 1. Conceptual Model for Green Purchase Behavior.

Note in the figure above that altruism has two paths to behavioral intent. First, altruism is shown to indirectly effect green purchase behavior by leading to beliefs which in turn, influence attitude, subjective norm and perceived control, which finally lead to behavioral intent. This route is the traditional path guided by the Theory of Planned Behavior. Second, because altruism is considered a value and people often express their values directly through behaviors such as purchases or political action (Baron, 1999), it is possible that altruistic values directly influence green purchase behavior; Thus, there is a second path in the conceptual model that displays altruism directly effecting green purchase behavioral intent.

Due to the fact that the purchase of environmentally friendly products benefits others and impacts more than just oneself, the purchase of such products could be

considered an act of altruism. Thus, going forward, this conceptual model will be used to seek further understanding of the impacts and interactions of altruistic values and beliefs on behavioral intent related to product advertising that carries a social message, specifically, a message of sustainability. The model considers personal values and beliefs that consumers bring to the green purchasing process, and seeks to explore what motivates consumers to make purchases that benefit something or someone other than themselves.

This study consists of two phases that work together to explore social messaging in product advertising: first a belief elicitation study designed to uncover specific attitudes and beliefs regarding environmentally friendly products and purchasing, and second a survey incorporating the identified attitudes and beliefs, along with measures of altruism, in an effort to explore the potential influence of altruistic values on green purchase behavior. This study hopes to add to the body of knowledge regarding social marketing and green communication by opening discussion regarding the following questions: What are the salient attitudes and beliefs regarding purchasing environmentally friendly products? When it comes to everyday buying behaviors, what role does altruism play?

Contribution to the Field

This study is an exploration of the potential power of consumers to motivate and influence social change through their everyday purchasing behavior. This contribution is important to society on two dimensions. First, it explores the potential of product advertising to affect behavioral intent related to a social issue: sustainability. Second, it

considers the role that values, specifically altruism, play in everyday purchasing decisions.

This study also contributes to advertising and marketing scholarship in two ways. First, it will attempt to incorporate a value structure into previously established behavioral theories. Also, because this study is uniquely different from traditional advertising, social marketing, public relations and corporate image research, this study has the potential to advance the scholarship on the green consumer as well as the social effects of advertising.

CHAPTER II: REVIEW OF LITERATURE

The Role of Altruism

Altruism is a human value that plays a central role in one of the largest social issues we face today: sustainability. Becoming a sustainable society will allow our planet to continue supporting human life as we know it. As a society, our changing focus toward goals of sustainability presents a shift, or a re-prioritization, in values. These values are being expressed not only in homes and schools, but also in check-out lines across America. Where once security and achievement were the universal values influencing everyday decisions and purchases, today altruism has begun to play a more central role.

Take for example the eco-friendly Toyota Prius. This vehicle is a "green" product with much consumer demand. Consumers know that the money they save on gasoline will not "make up" for the high purchase price of the vehicle; however, they choose to buy a Prius anyway. Why? More recently, just about every automobile maker has released a model that includes an "eco" button. This button allows the driver to switch the vehicle into an eco-friendly mode that conserves fuel or energy in a variety of ways depending on make and model. To date, Chevrolet, Dodge, Honda, Hyundai, Infiniti, Nissan, Toyota, and Lexus all have a model with an "eco" button feature. This feature has been the focus of advertising campaigns currently on television, and like the Prius, the price tag attached to a vehicle with this "eco" button is higher than a vehicle without the button. So what is the benefit to the consumer? One could argue that the benefit is not to the individual purchasing the car; it is not a self-oriented benefit. Any "eco" benefit is an other-oriented benefit, and thus tied to altruism. On the other hand, one

could also argue that depending on the type of product, conspicuous or inconspicuous, the feature may benefit the individual making the purchase. One who is seen using "green" products may be considered "cool" or "hip" or "on trend."

The study of altruism within the field of persuasion is important because it not only investigates a potential value shift in the population, but also because of the potential power of product advertising to motivate and influence social change. And specifically, in the case of this research, it points to a very current and critical social issue: sustainability.

Altruism within the field of persuasion has been studied previously, however not within the realm of product advertising. Recent literature has conceptually defined altruism in great detail—identifying a variety of levels and states of altruism. For example, Andreoni was one of the first to differentiate "pure" altruism from "impure" altruism (1990). Pure altruism follows the definition above (selfless concern for the well-being of others), while impure altruism allows for other influencing factors to have an impact on an altruistic act (Andreoni, 1990). These other factors could include pleasant feelings, or a "warm-glow," experienced by the person performing the act, or perhaps a personal benefit granted to the actor such as prestige in the community.

Other scholars have also contributed to the definition of altruism by expanding the term into four dimensions: reluctant altruism, pure altruism, impure altruism and warm glow (Ferguson et al., 2012). Pure and impure altruism hold the definitions as outlined above by Andreoni, while reluctant altruism is identified as an altruistic motivation with an underlying feeling of distrust of others (Ferguson et al., 2012); in other words, a reluctant altruist will help because "no one else will do it." Warm glow altruism is

considered a form of impure altruism, where the motivation to help is not strictly for the benefit of another, but also for the positive emotional feeling gained by the simple act of helping another (Ferguson et al., 2012).

This study conceptually defines altruism at the general level: a concern or act that benefits the well-being of another and that may or may not also present the altruist with any sort of personal gain. This was done because research has shown that measuring altruism at the more general level (vs. a specific level) produces the strongest assessment of the altruistic trait (Rushton, Chrisjohn & Fekken, 1981)

Throughout previous research, altruism has been operationally defined and investigated in a variety of ways. Altruism and the ideas of helping have been defined and measured as pro-social behavior, empathy, other-focus, motivations for helping, and reasons for helping, volunteering or donating.

With regard to motivations for volunteering, donating and helping others, several consistencies are present in the literature. Various factors have been analyzed via semantic differential and likert scale rankings including motivations to help such as social, career, eco-centric, ego-protective, gratitude, guilt, empathy, quest for new, quest for oneself, and simply to achieve something positive for others (Grant & Gino, 2010; Marta, Guglielmetti & Pozzi, 2006; Massi Lindsey, Kimo & Hill, 2007; Rehberg, 2005). The key findings in these studies refer to the fact that there usually is not just one motivating factor involved in helping others or behaving altruistically. A study by Faseur and Geuens confirms this. A comparison of other-focused motivations and mixed-focus (self/other) motivations found that mixed-focused emotions led to higher egoistic

motivations, whereas other-focused emotions led to greater altruistic motives (Faseur & Geuens, 2010).

Further, scholars have worked to determine which factors or variables produce stronger desire to help, as well as which type of appeals for help are best received. When comparing empathy to distress, it was found that empathetic responses were related to altruistic motivations, while personal distress responses were related to egoistic motivations (Batson et al.,1983). In addition, a comparison of an emotional approach, such as a reenactment of a child abuse situation, with a rational approach such as the viewing of the paperwork for a child abuse case, indicates that an emotional approach creates a stronger desire to help (Bagozzi & Moore, 1994). Finally, when it comes to volunteering, other-oriented values and motivations seem to be much more influential than self or ego-focused values and motivations (Briggs et al., 2010).

In their attempt to measure motivation to help, other scholars have framed their research in strategic communication, creating and manipulating public service announcements and advertisements. Results have shown a variety of findings dependent on the variables under study. It has been shown that ones moral and personal values do influence purchase behavior, and that consumers have moral opinions regarding their purchasing decisions (Baron, 1999). For example, Baron states that we can expect someone "to avoid active participation in anything that violated" their values or beliefs (p. 263). This "active participation" includes buying behavior.

Another slightly divergent, yet related study shows that higher levels of extrinsic motivation can actually defeat or override potential underlying intrinsic motivation (Anghelcev & Eighmey, 2007). The term "crowding out" is applicable here as well as

with Batson et al, and can be explained as a shift in motivation. Once the price of helping gets too high, many tend to shy away from assisting (Batson et al., 1983). Or, once the extrinsic value hits a tipping point, intrinsic or altruistic motivations tend to disappear (Anghelcev & Eighmey, 2007). If these findings were to be consistent across studies, one might predict that the monetary price of environmentally friendly products could be an inhibiting factor with regard to intent to purchase such environmentally friendly products.

A final site where altruism and motivation to help have been studied, beyond public service announcements and advertisements for volunteers or donations, is the cause-related marketing sector. Cause-related marketing can be defined as an application of marketing strategies and techniques to the selling of social causes and ideas (rather than products and services) (Fox & Kotler, 1980). Cause-related marketing (CRM), sometimes referred to as social marketing and social-cause marketing, is quite prominent in the marketplace today. Some CRM is authentic, in that its creation is motivated by pure altruism; however, much would be considered motivated by impure altruism, in that a benefit is gained by the creator of the message on top of the social cause or idea alone. As stated earlier, this study will consider any and all dimensions of altruism.

CRM has been on the radar of various scholars for decades. When one receives a request or a plea for help they have a choice to fulfill that request or not. Cause-related marketing takes the request for help to a larger level, putting the help message on a mass scale in an effort to reach a great number of potential "helpers."

Research looking at cause-related marketing has focused mostly on consumer responses to CRM (Hamlin & Wilson, 2004; Dean, 2003; Webb & Mohr, 1998).

Research has shown that consumers have a more favorable response to a brand or company that puts forth a CRM message than to a brand or company that does not have a CRM messaging strategy (Nan & Heo, 2007). Consumers are also concerned with the authenticity of the CRM message or the effort the company puts forth. If consumers connect altruism (vs. persuasion or egoistic motives) to the message, higher credibility is generated for the brand (Bigne-Alcaniz, Curras-Perez & Sanchez-Garcia, 2009; Morales, 2005). And further findings indicate that altruistic driven consumers form their judgment on brand credibility via altruistic attribution, whereas consumers who are not altruistic by nature, base their assessment of a company's altruism on the cause-brand fit or how similar and compatible the cause and the brand are (Bigne-Alcaniz et al., 2009).

Grau and Folse (2007) have explored what type of CRM message (national or local), what type of frame (positive or negative) and what type of consumer (high or low involvement) result in the most positive CRM evaluations. Their findings include an understanding that local causes and positive frames result in positive evaluations for low involvement consumers (Grau & Folse, 2007).

Last, a recent survey of psychographic data analyzed consumers' psychographics in relation to their perceptions of cause-related marketing. Findings related to CRM and altruism include the observation that consumers who purchase products tied to social causes may be viewed as performing responsible behavior via consumption, and that buying products that are supporting social causes or ideas through their cause-related marketing may be a way for consumers to express their motivation to be more socially responsible (Youn & Kim, 2008).

These findings tie directly to the study at hand and lead to the following questions: What happens when social issues are incorporated into product advertising? When it comes to building brand communities, how much stronger might a brand community be if altruistic values were inserted into the branding efforts?

Strategic Research Site: Green Marketing

Since the inception of the environmental movement in the late 1960s, marketers have been considering the possibility and potential of environmentally concerned consumers. By the early 1990s many marketers had begun to give environmental or "green" appeals serious consideration, if not application, within their marketing strategies. Today, environmental or green claims made by products and services through marketing is not unexpected; however, today's consumers see through a simple green appeal and often look for more of an authentic corporate value expression: a concern for sustainability.

The definition of green marketing or green advertising varies throughout the literature, but for this study green marketing and advertising will follow Hartmann and Apaolaza-Ibanez's definition and will be considered the marketing or advertising of a product or brand through the use of environmental claims (such as environmentally friendly, eco-safe, recycled, bio-degradable, etc) (Hartmann & Apaolaza-Ibanez, 2009).

Green marketing research began to emerge just after the onset of the environmental movement. In 1971, Kassarjian conducted one of the first studies related to green marketing. Kassarjian investigated concerns for air pollution in relation to gasoline advertising and found that individuals who were concerned about air pollution were receptive to the environmental advertising claim. He also found that individuals

who were not concerned about air pollution were also receptive to the environmental advertising claim, to a lesser degree (1971). Kassarjian also examined individual factors (age, socio-economic status, education) and found no connection between those individual factors and preference for or against environmental advertising claims.

It wasn't until the early 1990s that academics began to take a serious look at green marketing as an area ripe for scholarly work. Beginning in the 1990s with an explosion of green investigations and leading up to today, green communication research has ranged from content analyses, experiments and surveys to exploratory studies including textual, rhetorical, legal and historical analyses, and case studies.

Multiple content analyses have been conducted on green marketing over the past two decades. Three were conducted in the 1990s, one in 2007, and an ethnographic content analysis in 2012. The 1990s content analyses focused on basic underpinnings of green advertising. Banerjee, Gulas and Iyer (1995) examined 268 green advertisements (both print and broadcast) in an effort to categorize the types of green appeals used by advertisers. Their findings allowed for a categorization of green advertising into three dimensions: sponsor type (for-profit and non-profit), ad focus (advertiser or consumer), and depth of the ad as it relates to the environmental movement. They also concluded that green advertisers were limited in their exploration of depth of environmental issues and opted to present more of a simple acknowledgment of concern for the environment (Banerjee et al., 1995).

A second content analysis, also executed in the 1990s was seeking to not only explore the type of environmental claim (using an original typology--product, process, image or fact), but also sought the potential for deception in green advertising (Carlson,

Grove & Kangun, 1993). Results indicate that overall more advertising claims were classified as image ads and fewer were process-oriented, while at the same time more claims contained misleading or deceptive elements than those deemed acceptable (Carlson et al., 1993).

A third and most comprehensive content analysis of the 1990s includes the study of a twenty-five-year span of green advertisements. Easterling, Kenworthy and Nemzoff (1996) examined environmental advertising from 1969 through 1994. In their research, and using Carlson et al's original typology, they determined that there is a relationship between the country's general mood and environmental advertising. The authors also found that the two most common approaches to green advertising over this twenty-five-year period were product and image oriented (Easterling et al., 1996).

More recently, an additional content analysis on green advertising was conducted. Spears and Germain (2007) analyzed green advertising from 1900 through 2000, specifically looking at animal-human relationships. The researchers observed that in the early part of the century, humans were the central focus in advertisements. At this time, if animals were shown in advertisements most were shown in cages or captivity. Near the later years of the century, as concern for the environment increased, the green sentiments shifted and more animals were shown in their natural settings (Spears & Germain, 2007).

Last, the ethnographic content analysis (paired with interviews) conducted by Fowler and Close (2012) concluded with the identification of a "green gap." This green gap pertains to different thoughts, ideas and agendas between advertisers and consumers with regard to their ideas on green advertising, green products and their abilities to make

a difference toward saving the planet. Some of the advertisers using green messaging appear to be truly seeking to help save the planet while others are merely using green messages to sell their products. Consumers on the other hand often are simply trying to avoid ruining or wasting their own personal space on the planet and feel that saving the planet as a whole is too big of a task, or someone else's responsibility (Fowler & Close, 2012).

Survey and experimental research has also been conducted in the area of green marketing and advertising. Both the 1990s and 2000s have produced several studies. Stafford, Stafford and Chowdhury (1996) examined various appeals that may have an impact on positive reception of green advertising. The appeals investigated included concern for individual health, concern for wildlife, concern for waste, energy awareness, concern for popular issues, concern for environmental technology and concern for the biosphere. Results indicate that concern for individual health was the most effective appeal (Stafford et al., 1996).

Several more recent experiments sought to determine which type of environmental claim or appeal was preferred by consumers and which claim type would positively affect attitude toward the brand (Chan, 2000; Hartman & Apaolaza-Ibáñez, 2009; Montoro-Rios, Luque-MartÍnez & RodrÍguez-Molina, 2008). In these cases, various environmental claims, such as substantive and associative, were explored. Results of these more recent studies have been mixed most likely due to the diversity in typologies explored.

Past surveys regarding consumer attitudes toward green marketing and advertising have also provided scholars with a framework for building current green

marketing research. In 1998, Newell and Goldsmith analyzed the effects of misleading or deceptive environmental advertising claims. They sought to answer two questions: First, can environmentally conscious consumers identify deceptive green advertising claims? And second, what impact does the perception of deceptive advertising have on the perceptions of company credibility, attitude toward the ad, attitude toward the brand, as well as potential purchase? Results of this study include multiple findings. First, increased level of environmental concern did not lead to an increased perception of deception (Newell & Goldsmith, 1998). Second, perceived advertising deception does have a negative effect on advertiser credibility, attitude toward the ad, and attitude toward the brand, while perceived advertiser credibility has a positive effect on attitude toward the ad, and positive attitude toward the ad will have a positive effect on attitude toward the brand (Newell & Goldsmith, 1998).

Additional surveys were executed in the 2000s to further explore green marketing and advertising. Consumer attitudes toward green products in general were found to be positively related to one's natural environment orientation, overall knowledge of ecology, as well as a personal concern for the environment (Mostafa, 2007). Further, consumers with a more positive attitude toward green products were found to have a higher intention to purchase green products (Mostafa, 2007).

Chen took a slightly different approach to green marketing research with his study. His survey of over 250 consumers found that companies looking to build green brand equity should focus on building green brand image, green brand trust and green satisfaction (Chen, 2010).

A final approach to previous literature on green marketing and advertising research has been one of different and sometimes exploratory routes. A variety of analyses including textual, rhetorical, historical and legal have all been conducted in examination of environmental communication.

To address the concern of deceptive green advertising appeals, Scammon and Mayer (1995) conducted a legal analysis of environmental claim challenges brought by US regulatory agencies. They found that many challenged claims (degradability, recycled content, and absence of ozone depleting chemical claims) were similar and were resolved through the regulatory agencies; however, as generality of claims and implied claims increased, many were still unresolved. The authors conclude by summarizing that regulation of environmental marketing claims is an effort to create a marketplace where sellers can compete fairly with regard to environmental impact by regulating clarity and definition of eco-terms (Scammon & Mayer, 1995). This definition of eco-terminology is continuously under revision and clarification at regulatory agencies today.

Even further green marketing and advertising research has been conducted in an exploratory fashion. Durham and Hancock (2003) and Smerecnik and Renegar (2010) have analyzed the rhetoric of British Petroleum's (BP) marketing and advertising and have concluded that there is conflict between altruistic environmental concerns and corporate success. Additional exploratory studies have found the environment itself has been branded (Hansen & Machin, 2008), that green marketing and advertising has not yet contributed to societal sustainability (Peattie & Crane, 2005), and that green advertising in general facilitates consumption and not true ecological motives (Meister, Chamberlai, & Brown, 2006).

Green advertising has been examined from a variety of perspectives: from consumer receptivity of green messages, to the understanding the effectiveness of green appeals, and even explorations of brands and products and their use of environmental communication. Overall, the conclusion that can be drawn after reviewing the previous literature on green advertising is this: Researchers of green marketing and advertising have spent much time and energy exploring the differences between a variety of green claims and a variety of consumer types, as well as consumer responses to a variety of green advertising claims. However, the previous literature has yet to provide empirical evidence of the potential impact of altruism or other-oriented values on the purchase of everyday consumer products.

The literature on altruism presents multiple explorations of human values and beliefs, and how these values and beliefs relate to various behaviors. This current research seeks to combine the two fields of research, altruism and green advertising and asks this: When it comes to everyday buying behaviors, what role does altruism play?

This dissertation takes a two-stage approach in an effort to understand the effects of altruism on green purchasing behavior. The first stage of this research is an elicitation study, which seeks to understand consumer attitudes and beliefs regarding environmentally friendly products and purchases. Second, is a main survey that incorporates the salient attitudes and beliefs identified by the elicitation study and explores the potential influence of altruism on green purchase behavior and behavioral intent.

CHAPTER III: METHODOLOGY

Rationale, Central Questions & Hypotheses

Because the purpose of the study was to explore the value of altruism and its relationship to green purchase behavior, this design is multi-staged and exploratory. First, in an elicitation study the goal was to explore and generate themes or patterns about consumers general attitudes, beliefs and ideas about green purchase behavior. Next, including the findings of the elicitation study, the main survey instrument was developed in an effort to survey a larger sample of consumers regarding their attitudes, beliefs, and behaviors related to green purchase behavior.

The goal of an exploratory study, such as this, includes searching for indicators rather than causes (Tukey, 1962, 1986). The central questions being investigated in this two-stage sequential, multi-method study are as follows: What are the salient attitudes and beliefs among adult consumers with regard to green purchase behavior? And second, when it comes to green purchase behavior, how does altruism affect the process?

Eight hypotheses were tested in this study. They are as follows:

H_1: Altruism predicts beliefs toward green purchase behavior intent.

H_2: Beliefs predict attitudes toward green purchase behavior intent.

H_3: Beliefs predict subjective norms regarding green purchase behavior intent.

H_4: Beliefs predict perceived behavior control regarding green purchase behavior intent.

H_5: Attitudes toward green purchase behavior predict behavioral intent to purchase environmentally friendly products.

H_6: Subjective norms regarding green purchase behavior predict behavioral intent to purchase environmentally friendly products.

H_7: Perceived behavior control regarding green purchase behavior predicts behavioral intent to purchase environmentally friendly products.

H_8: Altruism predicts green purchase behavior intent.

The following figure displays how the eight hypotheses are placed within the conceptual model discussed in chapter 1.

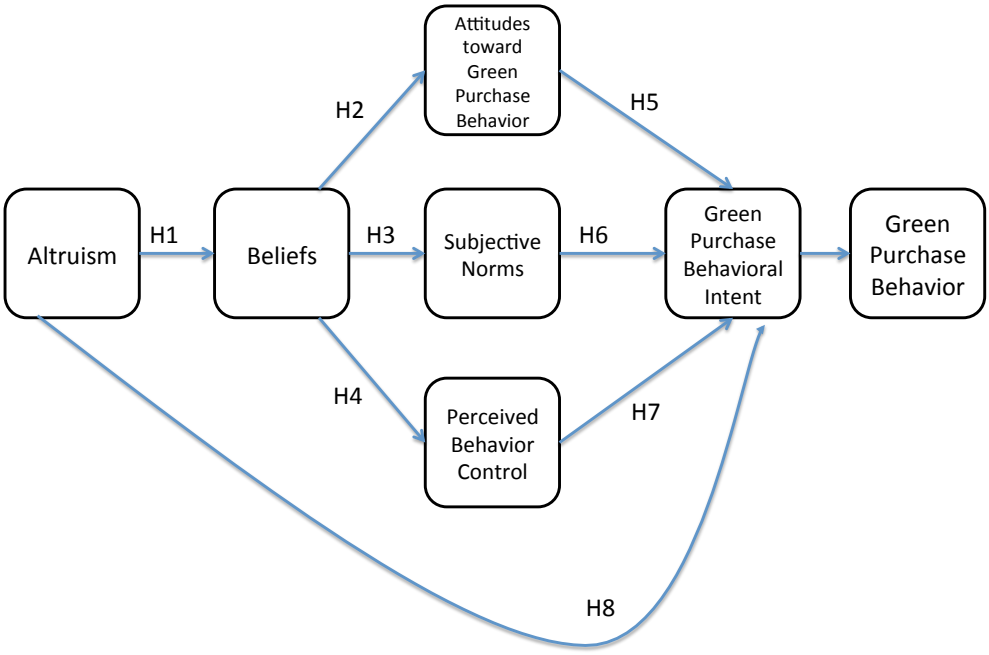


Figure 2. Conceptual Model for Green Purchase Behavior with Hypotheses.

Study Design

This study is an investigation of the perceptions and behavioral intentions of adults in the United States related to green purchase behavior. Because there is no

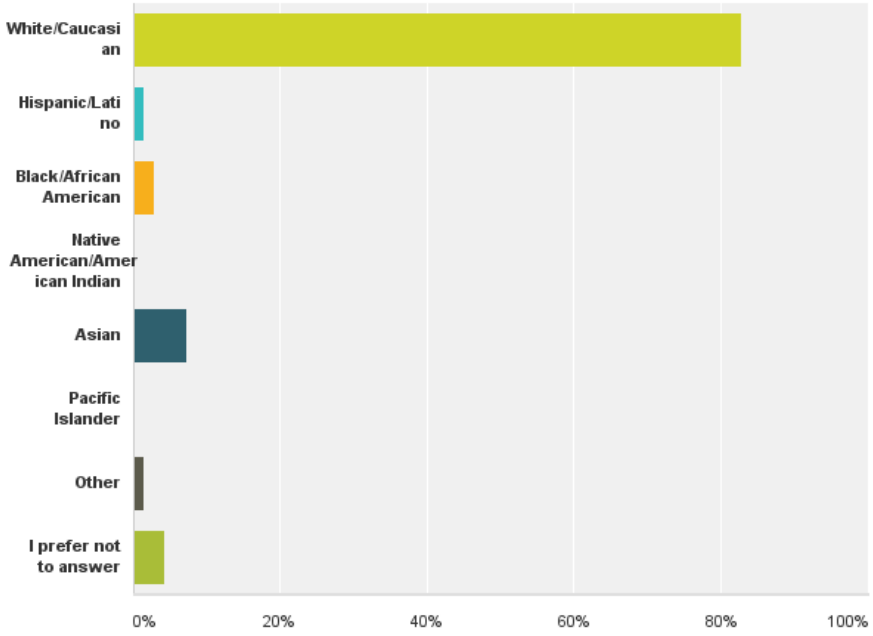
standard scale established to measure constructs of the Theory of Planned Behavior, Ajzen (2002) recommends conducting a pilot or "elicitation" study to identify behavioral, normative and perceived control beliefs related to a particular behavior prior to developing the main survey instrument for the study. Thus this research uses a two-stage design to examine the role altruism plays in green purchase decisions: the pilot, or belief elicitation study, and the main study. Approval was requested and granted by the Institutional Review Board (IRB) prior to both the elicitation study and the main study.

I. Elicitation Study

The purpose of the elicitation study was an exploration to determine the sample's salient beliefs about purchasing environmentally friendly or "green" products, which would then be translated into belief measures related to attitudes toward green purchase behavior, as well as social norms and perceived behavior control relative to green purchase behavior. These beliefs were used in creation of the survey instrument for the main study.

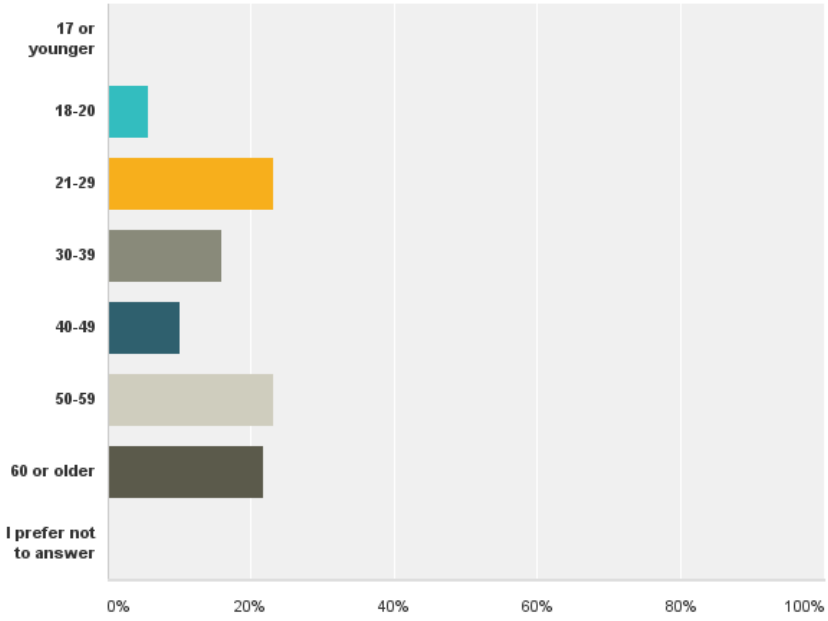
The elicitation survey was administered online to a random sample of adults 18+ in the United States. Seventy-one questionnaires were distributed through an online survey company (Survey Monkey) and fifty responses were received (a response rate of 70%).

Participants: The participants were 49% female and 51% male. Eighty-three percent of the participants identified as white/Caucasian, 7% Asian, 3% African American, 1% Hispanic/Latino, 1% identified as "other" and 4% preferred not to answer the ethnicity question.



The majority (52%) of the participants held a bachelor's degree or higher, and 52% of the participants had a household income of $50,000 or higher.

Six percent of the participants were aged 18-20; 23% were 21-29; 16% 30-39; 10% were 40-49; 23% were 50-59; and 22% were 60 years of age or older.



All areas of the country were represented in the sample and nearly half of the sample was either married or in a domestic partnership (49%).

The questionnaire consisted of open-ended questions inquiring about beliefs on environmentally friendly or "green" products and green purchase behaviors (see Table 1 below). There were nine open-ended belief-related questions. Key issues explored include the advantages and disadvantage of buying green products (attitudes), perceptions regarding influential sources (organizations and/or persons) pertaining to their beliefs about green products and/or purchasing (subjective norms), as well as participant thoughts on their ability to purchase green products (perceived control). The elicitation study also probed for salient green products or product categories.

Table 1. Elicitation Study Questionnaire.

Elicitation Study Questionnaire

Attitude	What do you think would be the advantages for you of purchasing environmentally friendly products in the next 12 months? What are the good things that might happen if you were to purchase environmentally friendly products in the next 12 months?
	What do you think would be the disadvantages for you of purchasing environmentally friendly products in the next 12 months? What are the bad things that might happen if you were to purchase environmentally friendly products in the next 12 months?
	What would you like or enjoy about purchasing environmentally friendly products in the next 12 months?
	What would you dislike or hate about purchasing environmentally friendly products in the next 12 months?
Subjective Norm	Please list any individuals or groups who would approve of or think that you should purchase environmentally friendly products in the next 12 months?
	Please list any individuals or groups who would disapprove of or think that you should not purchase environmentally friendly products in the next 12 months?
	Are there any other individuals or groups who come to mind when you think about your purchasing environmentally friendly products in the next 12 months?
Perceived Control	What factors, circumstances or settings do you think would make it difficult or prevent you from purchasing environmentally friendly products in the next 12 months?
	What factors, circumstances or settings do you think would make it easy or enable you to purchase environmentally friendly products in the next 12 months?
	Please list any and all types of environmentally friendly products that you have purchased in the past 12 months.
	Please list any and all types of environmentally friendly products that you would like to purchase in the next 12 months.
	Please list any an all products that came to mind while you were taking this survey.

Participants in the elicitation study were told that they would participate in a study that would explore attitudes, values and perceptions related to purchasing environmentally friendly products. “Purchasing environmentally friendly products” was defined as: purchasing any consumer goods that claim to administer reduced, minimal, or

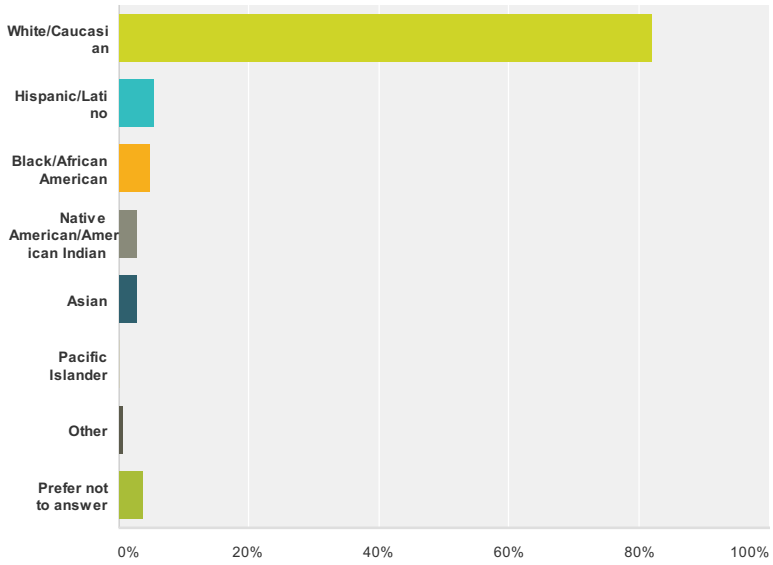
no harm at all upon ecosystems or the environment. Examples of environmentally friendly products were also provided to the participants and included automobiles, cleaning supplies, clothing, appliances, office supplies, light bulbs, sporting gear/goods, toys, and home goods. Participants were asked to write down anything and everything that came to mind while taking the elicitation survey.

Data from the elicitation study was analyzed using a flexible coding method. Flexible coding is defined as a type of qualitative coding that allows unique categories of data to appear rather than using preconceived categories (Treadwell, 2014). Due to the nature of the open-ended questions used in the elicitation study, flexible coding was necessary to ensure that all participant beliefs were acknowledged and captured.

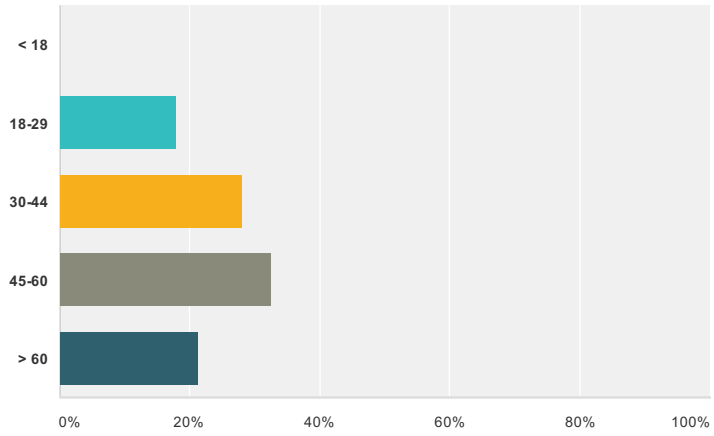
II. Main Study

The goal of the main survey was to measure how consumers incorporate thoughts on environmental sustainability into their purchasing decisions, and to address the research question regarding the potential impact of altruism on green purchase behavior. Overall, the survey included six points of measurement: altruism, beliefs, attitude, subjective norm, perceived behavior control, and behavioral intent.

Participants: The survey was conducted online using a random sample of 325 adults 18+ in the United States purchased through Survey Monkey. The participants were 51% female and 46% male. Eighty-two percent of the participants identified as white/Caucasian, 6% Hispanic/Latino, 5% African American, 3% Asian, 3% Native American/American Indian, 1% Pacific Islander, 1% “other” and 4% preferred not to answer the ethnicity question.



The majority (60%) of the participants held a bachelor's degree or higher, and 56% of the participants had a household income of $50,000 or higher. Eighteen percent of the participants were aged 18-29, 28% were aged 30-44, 33% were aged 45-60, 21% were over 60 years of age.



All areas of the country were represented in the sample and over half of the sample (57%) was either married or in a domestic partnership.

Research Measures: Theory of Planned Behavior (TPB) measures were operationalized on the basis of previous research scales and include beliefs related and relevant to attitudes, subjective norms, and perceived behavior control, altruism levels, and behavioral intent, as well as the results of the belief elicitation study (stage one of this project).

To measure levels of altruism, an abbreviated version of the previously tested altruism scale created by Rushton, Chrisjohn and Fekken (1981) was used. A sample of the likert scale measures used to measure altruism levels includes "I would offer my seat on a bus or train for a stranger who was standing," "I would voluntarily look after a neighbor's pets or children without being paid for it," and "I would give money to a charity."

Seven-point semantic differentials were used to measure attitude. The attitude measures included the following two likert scale statements: "My purchasing environmentally friendly products in the next 12 months is…" extremely negative to extremely positive, extremely good to extremely bad and extremely meaningless to extremely worthwhile. As well as, "I find purchasing environmentally friendly products…" extremely pleasant to extremely unpleasant, extremely annoying to extremely enjoyable and extremely unappealing to extremely appealing.

Belief questions, captured from the pilot elicitation study, related to the purchase of green products helping the environment, being more expensive than non-green products, and being encouraged by people and groups that are important to the participant, were also included in the main survey.

These three main beliefs were selected from the elicitation study as the most prominent beliefs under each of the three areas examined (attitude, subjective norm, perceived control). For example, helping the environment was the most common answer given (58%) when asked what was an advantage or good thing about environmentally friendly products (EFPs). Helping the environment also was the most common answer given when asked what one would enjoy about purchasing EFPs (34%). Expense appeared as the top belief twice under attitude, first when asked about disadvantages of green products (60%) and second, what do you hate about EFPs (58%), as well as twice under perceived control what would make it easier, "lower the price" (44%); and what makes it difficult, "too expensive" (69%). The general belief included in the main survey stating that purchasing EFPs would be "encouraged by people and groups that are important to me," was a summation of the variety of people and groups named in the belief elicitation study. Beliefs, like the other variables, were measured on 7-point scales.

Likert scales and semantic differentials were also used to measure subjective norms. Subjective norm questions include "My family thinks that I should purchase environmentally friendly products in the next 12 months" and "My friends and/or partner think that I should purchase environmentally friendly products in the next 12 months," as well as belief reflection, "I believe that my purchasing environmentally friendly products in the next 12 months would be encouraged by people and groups that are important to me."

Perceived behavior control ("My purchasing environmentally friendly products in the next 12 months is…" and "If I wanted to, I could purchase environmentally friendly products in the next 12 months") was again measured using likert scales and semantic

differentials. Questions created as a result of the elicitation study such as, “I believe that my purchasing environmentally friendly products in the next 12 months will require me to spend more money than if I were to purchase other non-environmentally friendly products” were also incorporated to measure perceived behavior control.

Finally, semantic differentials were used to measure behavioral intent (“How likely is it that you will purchase environmentally friendly products in the next 12 months?” and “I intend to purchase environmentally friendly products in the next 12 months”).

Table 2 below displays all of the measures and their operational definitions via questions used in the survey.

Table 2. Main Survey Questionnaire.

Main Survey Questionnaire

Subjective Norm	Most people who are important to me think that... I should (not) purchase environmentally friendly products in the next 12 months
	The people in my life whose opinions I value would... Strongly approve/disapprove of my purchasing environmentally friendly products in the next 12 months
	Most groups or organizations that are important to me think that... I should (not) purchase environmentally friendly products in the next 12 months
Attitude	My purchasing environmentally friendly products in the next 12 months is... Negative/positive
	My purchasing environmentally friendly products in the next 12 months is... Bad/good
	My purchasing environmentally friendly products in the next 12 months is... Meaningless/worthwhile
	I find purchasing environmentally friendly products... Unpleasant/pleasant
	I find purchasing environmentally friendly products... Annoying/enjoyable
	I find purchasing environmentally friendly products... Unappealing/appealing
Perceived Control	My purchasing environmentally friendly products... under my control/not under my control
	For me, purchasing environmentally friendly products in the next 12 months is... Impossible/possible
	For me, purchasing environmentally friendly products in the next 12 months is... Costly/economical
	For me, purchasing environmentally friendly products in the next 12 months is... Convenient/Inconvenient
Beliefs	I believe that my purchasing environmentally friendly products in the next 12 months will help the environment in some way.
	Helping the environment in some way is... Good/Bad
	I believe that my purchasing environmentally friendly products in the next 12 months will require me to spend more money than if I were to purchase other non-environmentally friendly products.
	Spending more of my money to help the environment in some way is... Bad/good
	I believe that my purchasing environmentally friendly products in the next 12 months would be encouraged by people and groups that are important to me.
	Encouragement from people and groups that are important to me is... Essential/nonessential
Altruism	I would offer my seat on a bus or train for a stranger who was standing.
	I would voluntarily look after a neighbor's pets or children without being paid for it.
	I would give money to a charity.
	I would delay an elevator and hold the door for a stranger.
	I would make change for a stranger.
	I would let a neighbor, whom I don't know very well, borrow an item of some value to me (e.g. dish, tools, etc.)
	I would give directions to a stranger.
	I would help an acquaintance move households.
	I would give money to a stranger who needed it (or asked me for it).
	I would help carry a stranger's belongings (e.g. books, parcels, etc.)
Behavioral Intent	How likely is it that you will purchase environmentally friendly products in the next 12 months?
	I intend to purchase environmentally friendly products in the next 12 months

Data for the main survey were collected via an online survey link administered through an online survey company. Participants were told that they would be answering questions related to attitudes and beliefs toward environmentally friendly products. Once data for the main survey were collected, the data were exported from the survey company software into JMP Pro 10 for analysis. Pearson's Correlation and Path Analyses were carried out to examine the data. The findings of these analyses and conclusions of the research are discussed in the next two chapters.

CHAPTER IV: RESEARCH FINDINGS

I. Elicitation Study Findings

Categories of data that appeared through the flexible coding procedure, reflecting participant attitudes and beliefs about purchasing environmentally friend products, are displayed in the Table below.

Table 3. Beliefs about Environmentally Friendly Products.

Beliefs about Environmentally Friendly Products			
			% of total responses
Attitudes	Advantages	better for the environment	58.5%
		better for personal health	17.0%
		save money	5.7%
		better for future generations	3.8%
		feel better about self	3.8%
		other	11.3%
	Disadvantages	expensive	60.4%
		not effective	18.8%
		potential deception (greenwashing)	8.3%
		lack of desired features	4.2%
		other	8.3%
	Enjoy	better for the environment	34.2%
		feel better about self	31.6%
		better for personal health	7.9%
		convenient	5.3%
		good smell	5.3%
		other	15.8%
	Hate	expensive	57.9%
		not effective	23.7%
		potential deception (greenwashing)	7.9%
		other	10.5%
Subjective Norms			
	Others approve	environmental organizations	25.9%
		friends	15.5%
		family	15.5%
		politicians/liberals	12.1%
		environmental companies	8.6%
		mother earth	5.2%
		other	17.2%
	Others disapprove	oil companies	20.0%
		politicians/conservatives	13.3%
		family	13.3%
		non-environmental companies	10.0%
		anti-environmentalists	6.7%
		friends	6.7%
		other	30.0%
Perceived Control			
	Easy	lower price	44.4%
		more convenient location	30.6%
		coupons/incentives	11.1%
		improved quality	5.6%
		more education on products	5.6%
		other	2.8%
	Difficult	too expensive	69.4%
		inconvenient	19.4%
		other	11.1%

The elicitation study showed that the sample under study generally believes that the biggest advantage of purchasing environmentally friendly products (EFPs) is that they are better for the environment than non-EFPs (46%). In response to the question, "What do you think would be the advantages for you of purchasing environmentally friendly products in the next 12 months? What are the good things that might happen if you were to purchase environmentally friendly products in the next 12 months?" respondents had the following replies:

> Respondent: "I believe it would help our Eco systems and improve living on earth."

> Respondent: "If everyone started to buy more eco friendly products, it would have a positive effect on the planet."

> Respondent: "Do my part to not further damage the environment."

The participants in the elicitation study also believe that the biggest disadvantage of purchasing EFPs is that they are more expensive than non-EFPs (59%) with a concern for the effectiveness of the product (21%). When asked, "What do you think would be the disadvantages for you of purchasing environmentally friendly products in the next 12 months? What are the bad things that might happen if you were to purchase environmentally friendly products in the next 12 months?" respondents replied:

> Respondent: "I will be spending way more money on less efficient products."

> Respondent: "I may have to pay a little more or worse yet a lot more."

Respondent: "Environmentally friendly products tend to be more expensive and the eco-friendly cleaning products do not work as well as their non eco-friendly counter parts."

In addition, approximately 23% of the elicitation sample believes that corporations and environmental organizations seem to be most concerned with whether or not consumers purchase EFPs, followed by respondents' families (14%), politicians (13%), and friends (11%). With regard to perceived control, the sample believed that if EFPs were less expensive (57%) and more readily available (25%), they would be easier to purchase.

Other beliefs about environmentally friendly products uncovered in the elicitation study worthy of note include advantages of purchasing EFPs such as better for personal health (17%) and to feel better about oneself (31%); disadvantages such as ineffectiveness (23%) and potential deception/greenwashing (8%). Participants also believe that EFPs would be easier to purchase if they were more readily accessible or conveniently located for sale (30%).

II. Main Survey Findings

The data set analyzed in the main survey contained responses from 325 subjects on 31 different questions (excluding the demographic survey questions). Each of the 31 questions was a 7-point scaled item. Six new variables were then created by averaging responses to items related to each of these variables: *Altruism, Beliefs, Attitudes toward*

Green Purchase Behavior, Subjective Norms, Perceived Behavior Control, and Green Purchase Behavioral Intent.

The responses from two subjects were dropped from the initial data set; these two subjects answered only a few questions on the survey, and there was some concern with the validity of their responses to those questions. All analyses were carried out using *JMP Pro 10*.

Purpose of the Study

The purpose of this study was to explore the value of altruism and its relationship to green purchase behavior. The research hypotheses were as follows:

H_1: Altruism predicts beliefs toward green purchase behavior intent.

H_2: Beliefs predict attitudes toward green purchase behavior intent.

H_3: Beliefs predict subjective norms regarding green purchase behavior intent.

H_4: Beliefs predict perceived behavior control regarding green purchase behavior intent.

H_5: Attitudes toward green purchase behavior predict behavioral intent to purchase environmentally friendly products.

H_6: Subjective norms regarding green purchase behavior predict behavioral intent to purchase environmentally friendly products.

H_7: Perceived behavior control regarding green purchase behavior predicts behavioral intent to purchase environmentally friendly products.

H_8: Altruism predicts green purchase behavior intent.

The following conceptual model (figure 3) was explained previously in chapters 1 and 3 and visually displays how the hypotheses are grounded in the Theory of Planned Behavior.

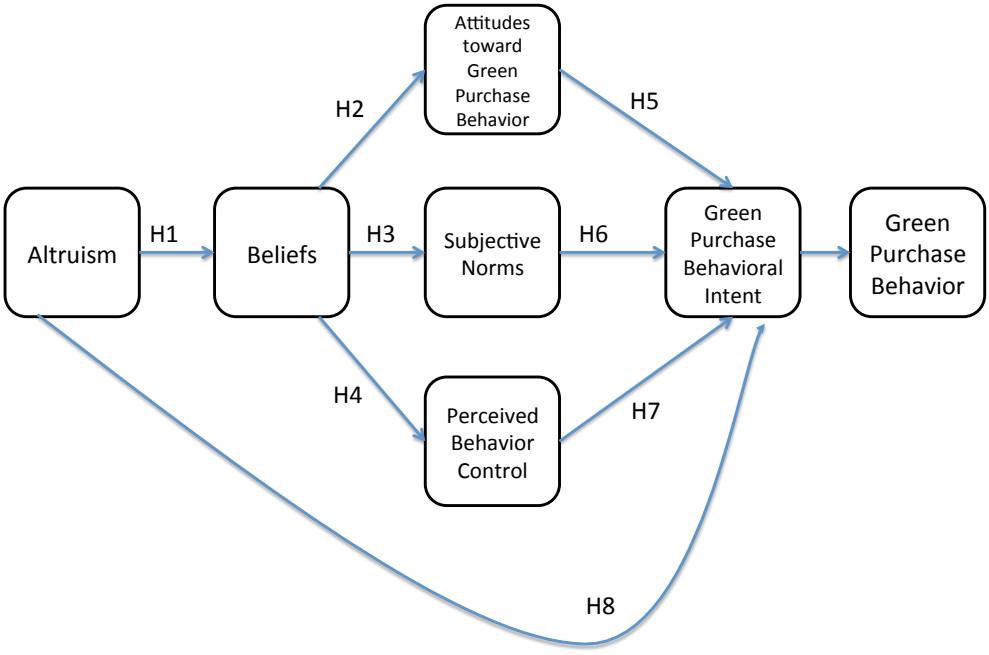


Figure 3. Conceptual Model for Green Purchase Behavior with Hypotheses.

Investigating Correlations

Pearson's correlation coefficients were calculated in an effort to investigate potential relationships between the six study variables. The following table (Table 4) contains Pearson's correlation coefficients. As you will see in Table 4, all correlation coefficients were significantly different from zero, which indicates the relationships between each pair of study variables are statistically significant; however, some of the correlation coefficients are fairly small in magnitude, which indicates that these relationships aren't particularly strong (e.g., Pearson's correlation between *Altruism* and *Subjective Norms* is only .1563).

All correlation coefficients are positive, which indicates a positive association between all variables; that is, when one variable increases, the others tend to increase as well.

Table 4. Pearson's Correlation Coefficients between Study Variables.

	Altruism	Beliefs	Attitudes	Subjective Norms	Perceived Control	Behavioral Intent
Altruism	_____					
Beliefs	.2037**	_____				
Attitudes	.2485**	.7471**	_____			
Subjective Norms	.1563**	.5370**	.6426**	_____		
Behavior Control	.2607**	.5155**	.6347**	.4384**		
Behavioral Intent	.2557**	.6574**	.8418**	.6524**	.6574**	_____

** $p < .01$

The relationship between *Behavioral Intent* and *Attitude* is the strongest relationship (+.8418), followed by the relationship between *Attitude* and *Beliefs* (+.7471). The relationships between *Altruism* and each of the other study variables are positive, but weak, even though they do display statistical significance.

Path Analysis

Path analysis is a statistical technique that can be used to examine the comparative strength of direct and indirect relationships among measured variables. The path analysis was selected as the most appropriate statistical test for this study because it allows both direct and indirect relationships to be examined, which coincides with the

theory and model under study in this present research. This particular analysis was carried out using *SAS Structural Equation Modeling 2.1 for JMP*.

To begin, a path diagram was created in *JMP* to represent the conceptual model. The bidirectional arrows have been included to account for the fact that *Attitude*, *Subjective Norms*, and *Perceived Behavior Control* are all correlated with one another. The unidirectional arrows indicate the paths of interest in the conceptual model.

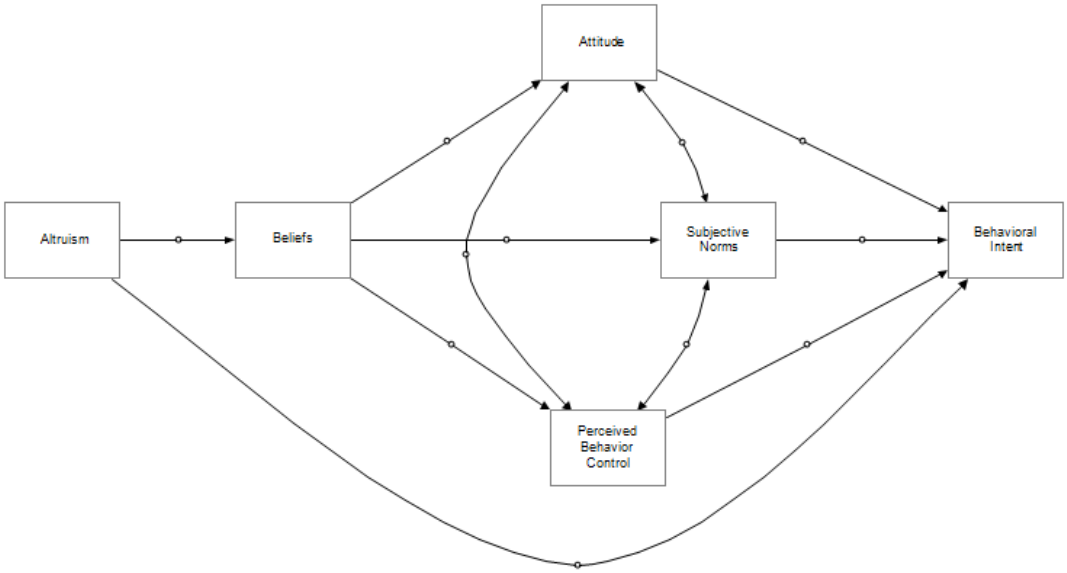


Figure 4. Path Diagram of Conceptual Model for Green Purchase Behavior.

A total of 311 observations were used in the path analysis, since observations with missing values for any variables in the analysis are omitted from the computations. First, to investigate model fit, the following fit statistics were examined. Most fit statistics indicate that the model is a good fit.

Table 5. Table of Fit Statistics for Path Analysis.

Fit Statistic	Value	Implication
Chi-square	17.44 (p = .0016)	A significant result indicates a poor model fit; however, a significant result often occurs with large sample sizes.
Standardized Root Mean Square Residual	.0472	A good model fit results in values less than .05.
Adjusted Goodness of Fit Index (GFI)	.9044	A good model fit results in values above .90.
Root Mean Square Error of Approximation (RMSEA)	.1041 90% CI: (.0573, .1564)	Values above .10 indicate a poor model fit.
Bentler Comparative Fit Index	.9868	A good model fit results in values above .95.

Three of the five fit statistics (standardized root mean square residual, adjusted goodness of fit index, Bentler comparative fit index) indicate a good model fit. The Chi-square fit statistic shows a significant value, however the sample under study is large, and as noted, the large sample size is most likely the reason that the statistic is significant. Thus, after reviewing the fit statistics, the conclusion was made that the model was a good fit for the path analysis.

Next, to investigate scale reliability and internal consistency for the six variables under study, Cronbach's alpha was calcuated. The rule of thumb for Cronbach's alpha is directly below (Table 6), while the calculated values for this study follow further down.

Table 6. Cronbach's Alpha "Rule of Thumb"

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.7 \leq \alpha < 0.9$	Good
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Table 7. Calculated Cronbach's Alpha for Current Study

Variable	Cronbach's Alpha
subjective norm	0.80
attitude	0.97
perceived control	0.58
beliefs	0.72
altruism	0.86
behavioral intent	0.89

As you can see from the tables above, five of the six variables fall in the good to excellent rating, while perceived control (0.58) is considered (by rule of thumb) poor to acceptable. Because the survey questions used to measure perceived control in this study are consistent with the style of perceived control measures tested and used in previous behavioral research (My purchasing environmentally friendly products in the next 12 months is… under my contol/not under my control; impossible/possible;

costly/economical; convenient/inconvenient), the scale reliability for all variables in this study will be considered acceptable.

Results of the Path Analysis

The following diagram (Figure 5) summarizes the results of the path analysis. Each estimated path coefficient is displayed on the path from one variable to another (the unidirectional arrows). Any estimates that are significantly different from zero (based on a t-test) are marked by two asterisks to indicate $p < .01$ and by one asterisk to indicate $p < .05$.

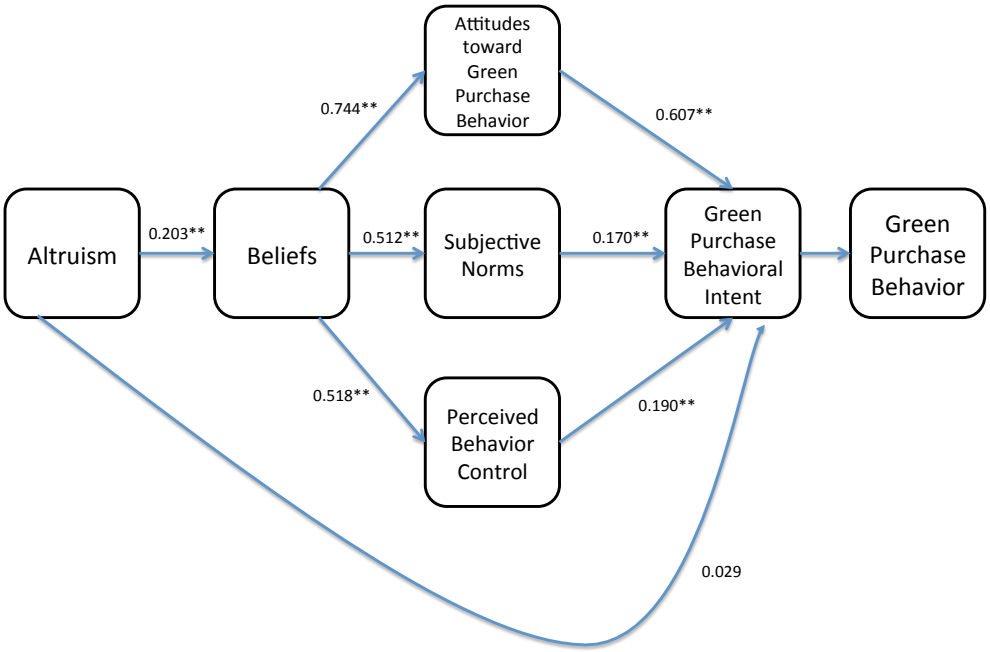


Figure 5. Results of the Path Analysis.

Note that all path coefficients are statistically significant at the $p < .01$ level, except for the path connecting *Altruism* to *Behavioral Intent* directly. For those path coefficients that are statistically significant, the results indicate that the paths represent

significant relationships between the variables. Moreover, the path parameters are all positive, indicating that higher values of each predictor are associated with higher values of the outcome.

The magnitude of the coefficients refers to how many standard deviations the outcome variable is expected to change per standard deviation increase in the predictor variable. For example, the standard deviations of *Belief, Attitude, and Perceived Behavior Control* scores were about 1, 1.5, and 1, respectively.

The path coefficient of .744 indicates that if *Belief* scores were to increase by one standard deviation (which is a 1 point increase), we expect *Attitude* scores to increase by about .744 standard deviations (which is about .744*1.5 = 1.1 points). On the other hand, if *Belief* scores were to increase by one standard deviation (about 1 point), we expect *Perceived Behavior Control* scores to increase by .518 standard deviations (which is about .518*1 = .518 points). In general, the larger the magnitude of the path coefficient, the stronger the effect of the predictor on the outcome variable.

The squared multiple correlations for each outcome variable are shown in Table 7 below. These values can be interpreted as follows: About 75% of the variation in *Behavioral Intent*, for example, can be explained by all of the other predictors (R-square = .7499). Similarly, about 55% of the variation in *Attitude* can be explained by its predictors in the model, *Beliefs* and *Altruism* (R-square = .5533). The other R-Square values, however, are lower (R-square = .2685, .2617). This indicates that *Beliefs* and *Altruism* are not as clear of predictors for *Perceived Behavior Control* nor *Subjective Norms*. The final R-square value (.0412) indicates that *Altruism* is not a clear predictor of *Beliefs*.

Table 8. R-Square Values for Study Variables.

Study Variable	**R-Square**
Behavioral Intent	.7499
Attitude	.5533
Perceived Behavior Control	.2685
Subjective Norms	.2617
Beliefs	.0412

Next, the total, direct, and indirect effects of the predictors on *Behavioral Intent* were examined in more detail. The results are shown in Table 9 below.

Table 9. Summary of Effects on Behavioral Intent (Effect / Standard Error / t-value / p-value).

	Total Effect	**Direct Effect**	**Indirect Effect**
Attitude	.6084 .04 15.22 **<.0001**	.6084 .04 15.22 **<.0001**	0
Beliefs	.6382 .0277 23.08 **<.0001**	0	.6382 .0277 23.08 **<.0001**
Perceived Behavior Control	.1904 .0369 5.16 **<.0001**	.1904 .0369 5.16 **<.0001**	0
Subjective Norms	.1703 .0369 4.62 **<.0001**	.1703 .0369 4.62 **<.0001**	0
Altruism	.1585 .0452 3.51 **.0005**	.0290 .0288 1.01 **.3126**	.1295 .0355 3.65 **.0003**

Note that the direct effect of *Altruism* on *Behavioral Intent* was not statistically significant ($p = .3126$); however, the indirect effect of *Altruism* on *Behavioral Intent* was significant ($p = .0003$). The direct and indirect effects of all other variables were shown to be statistically significant at $p < .0001$.

The correlation analysis and path analysis together indicate support for the original research hypotheses H1-H7.

H_1: Altruism predicts beliefs toward green purchase behavior intent.

H_2: Beliefs predict attitudes toward green purchase behavior intent.

H_3: Beliefs predict subjective norms regarding green purchase behavior intent.

H_4: Beliefs predict perceived behavior control regarding green purchase behavior intent.

H_5: Attitudes toward green purchase behavior predict behavioral intent to purchase environmentally friendly products.

H_6: Subjective norms regarding green purchase behavior predict behavioral intent to purchase environmentally friendly products.

H_7: Perceived behavior control regarding green purchase behavior predicts behavioral intent to purchase environmentally friendly products.

Hypothesis 8, Altruism predicts green purchase behavior intent, was partially supported. As indicated by the path analysis, the direct effect of *Altruism* on *Behavioral Intent* was not found to be statistically significant ($p = .3126$)*;* However, the indirect effect of *Altruism* on *Behavioral Intent* through the other predictor variables was found to be statistically significant ($p = .003$).

Further Belief Investigation

To explore the belief variable even further, supplementary analyses were conducted. First, correlations were reviewed to investigate potential relationships between the individual belief variables (*belief that environmentally friendly products, EFPs, help the environment in some way, belief that EFPs are more expensive than other*

products, and belief that EFP purchases are encouraged by those people and groups that are important) and the other five variables (*Altruism, Attitude, Subjective Norm, Perceived Control, Behavioral Intent*).

Pearson's correlation coefficients were calculated to explore these relationships. As you will see in the below table, most, but not all of the correlation coefficients were significantly different from zero, which indicates the relationships between each pair of variables is statistically significant. However, similar to the original set of correlations discussed earlier in this chapter, some of the correlations coefficients are fairly small in magnitude—indicating that these relationships are not particularly strong.

Table 10. Pearson's Correlation Coefficients between Study Variables (Individual Beliefs).

	Altruism	Belief	Attitudes	Subjective Norms	Perceived Control	Behavioral Intent
Belief: Help Environ	.1432*	_____	.6586**	.3984**	.4668**	.6137**
Belief: Expensive	.1528**	_____	.0516	.0133	-.1408*	.0023
Belief: Encouraged	.1194*	_____	.5977**	.5459**	.4756**	.6166**

*** p < .01* *** p<.05*

The relationship between the *belief that EFPs help the environment in some way* and *attitudes* is the strongest (+.6586), followed by the relationship between *belief that EFP purchases are encouraged by those people and groups that are important* and

behavioral intent (+.6166). It is interesting to note that all relationships are positive but one. The relationship between *belief that EFPs are more expensive than other products* and *perceived control* is negative *(-.1408),* this indicates that as one's belief that EFPs are expensive goes up, one's perceived control related to purchasing EFPs goes down. This relationship, although statistically significant, is, however, weak.

Next, new path diagrams were created in JMP to represent the conceptual models with three individual belief items (belief that EFPs help the environment in some way, belief that EFPs are more expensive than other products, and belief that EFP purchases are encouraged by those people and groups that are important) rather than using the variable created by averaging responses related to the belief variables in general. The three separate models follow:

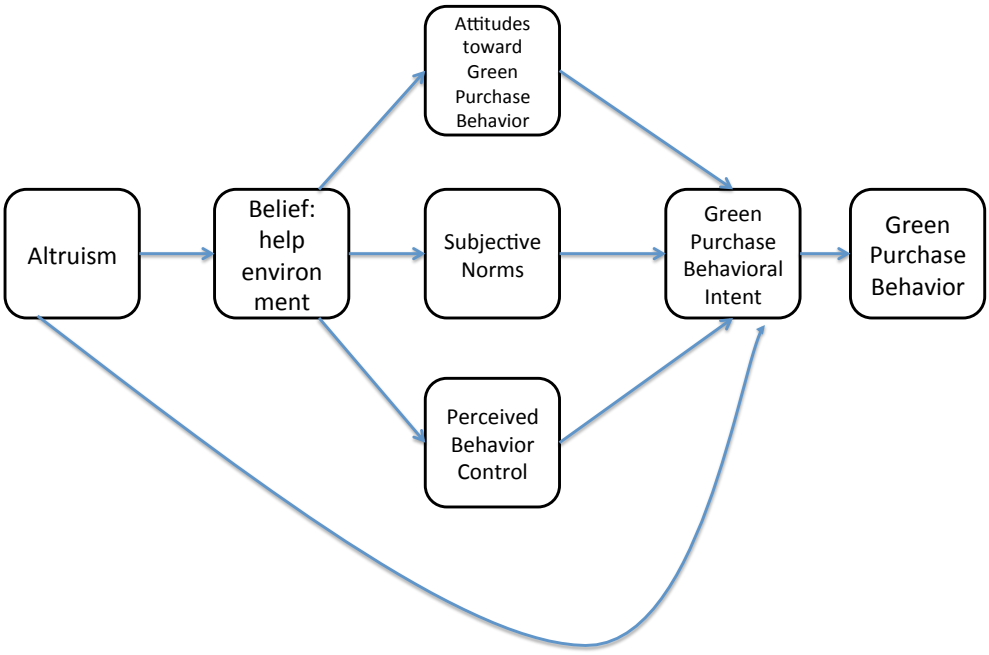


Figure 6. Conceptual Model for Individual Belief: EFPs help the environment in some way.

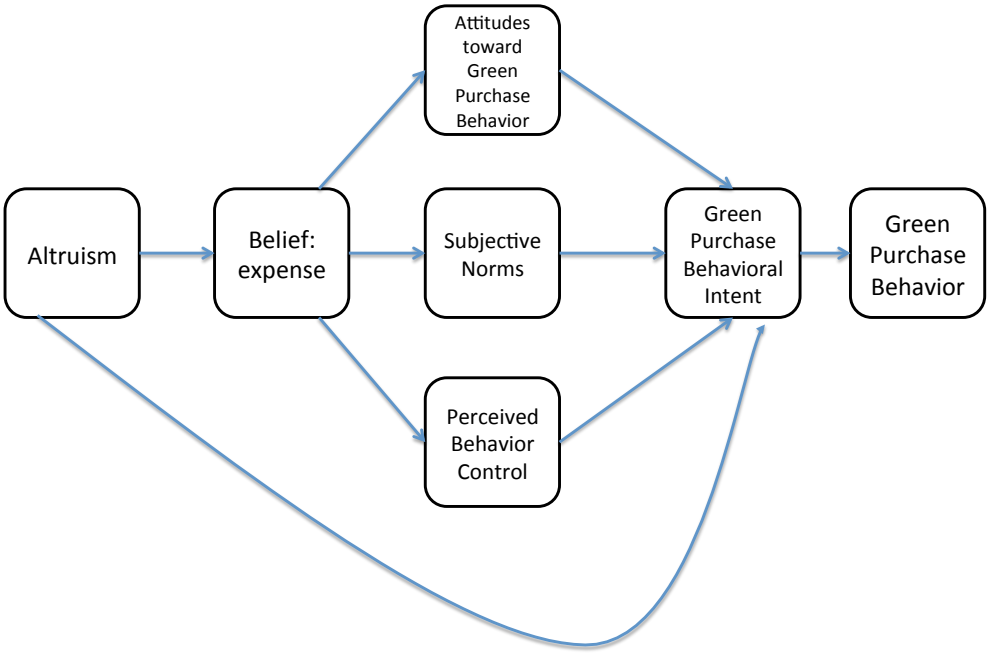


Figure 7. Conceptual Model for Individual Belief: EFPs are more expensive than other products.

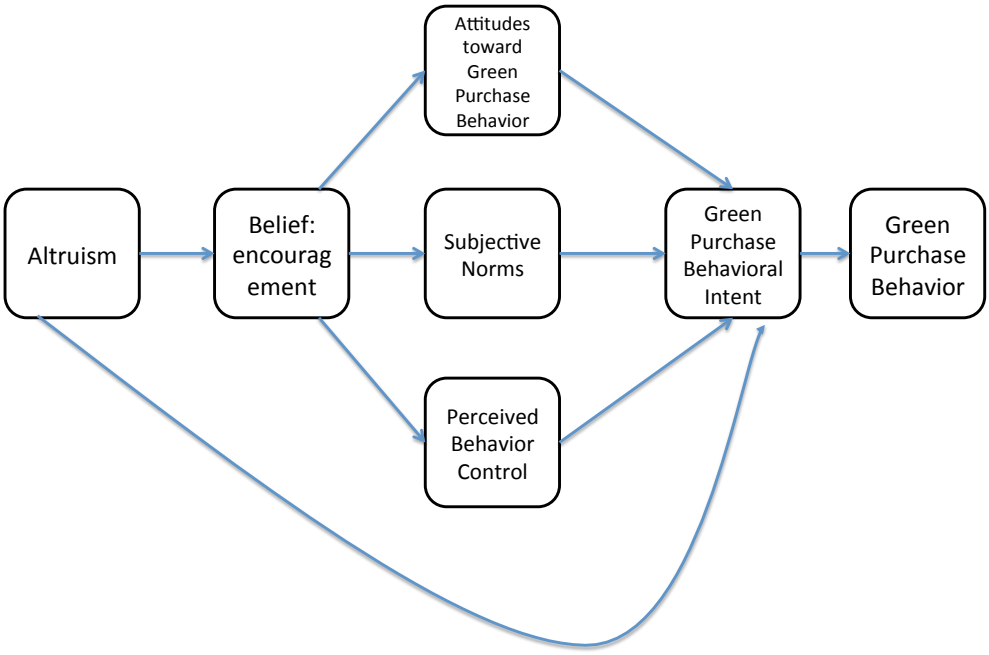


Figure 8. Conceptual Model for Individual Belief: EFP purchase is encouraged by those important.

Next, fit statistics were examined to investigate model fit. Some of the below fit statistics indicate that the model is a good fit for these three new tests; however some of the fit statistics below show that the model may not be a good fit for these additional analyses.

Table 11. Table of Fit Statistics for Path Analysis (individual belief 1).

Belief: EFPs help the environment in some way		
Fit Statistic	**Value**	**Implication**
Chi-square	25.4884 (p = <.0001)	A significant result indicates a poor model fit; however, a significant result often occurs with large sample sizes.
Standardized Root Mean Square Residual	0.0675	A good model fit results in values less than .05.
Adjusted Goodness of Fit Index (GFI)	0.8632	A good model fit results in values above .90.
Root Mean Square Error of Approximation (RMSEA)	0.1316 90% CI: (.0858, .1826)	Values above .10 indicate a poor model fit.
Bentler Comparative Fit Index	0.9772	A good model fit results in values above .95.

Table 12. Table of Fit Statistics for Path Analysis (individual belief 2).

Belief: EFPs are more expensive		
Fit Statistic	**Value**	**Implication**
Chi-square	28.7908 (p = <.0001)	A significant result indicates a poor model fit; however, a significant result often occurs with large sample sizes.
Standardized Root Mean Square Residual	0.0999	A good model fit results in values less than .05.
Adjusted Goodness of Fit Index (GFI)	0.8482	A good model fit results in values above .90.
Root Mean Square Error of Approximation (RMSEA)	0.1419 90% CI: (.0960, .1926)	Values above .10 indicate a poor model fit.
Bentler Comparative Fit Index	0.9686	A good model fit results in values above .95.

Table 13. Table of Fit Statistics for Path Analysis (individual belief 3).

Belief: EFP purchase is encouraged by those important		
Fit Statistic	**Value**	**Implication**
Chi-square	30.3777 (p = <.0001)	A significant result indicates a poor model fit; however, a significant result often occurs with large sample sizes.
Standardized Root Mean Square Residual	0.0716	A good model fit results in values less than .05.
Adjusted Goodness of Fit Index (GFI)	0.8371	A good model fit results in values above .90.
Root Mean Square Error of Approximation (RMSEA)	0.1463 90% CI: (.1005, .1969)	Values above .10 indicate a poor model fit.
Bentler Comparative Fit Index	0.9714	A good model fit results in values above .95.

For all three separate belief items, one of the five fit statistics indicates a good model fit (Bentler comparative fit index). The Chi-square fit statistic shows a significant value; however the sample under study is large, and as noted the large sample size is most likely the reason that this statistic is significant. The other three fit statistics (standardized root mean square residual, adjusted goodness of fit index and the root mean square error or approximation) show that the model may not be a good fit. Thus, the following results should be received with some caution.

Results of the Additional Path Analyses

Next, the total, direct, and indirect effects of the predictors, including the individual belief variables, on *Behavioral Intent* were studied in more detail. The results are shown in the tables below.

Table 14. Summary of Effects of Individual Belief 1 on Behavioral Intent (Effect / Standard Error / t-value / p-value).

Summary of Effects on Behavioral Intent (Effect / Standard Error / t-value / p-value).			
	total effect	direct effect	indirect effect
Attitude	0.6522 0.0431 15.1498 **<.0001**	0.6067 0.0428 14.1881 **<.0001**	0
Belief: Help Environment	0.5471 0.042 13.0301 **<.0001**	0	0.5471 0.042 13.0301 **<.0001**
Perceived Behavior Control	0.1898 0.0366 5.1804 **<.0001**	0.1898 0.0366 5.1804 **<.0001**	0
Subjective Norms	0.1698 0.0367 4.6293 **<.0001**	0.1698 0.0367 4.6293 **<.0001**	0
Altruism	0.1073 0.0422 2.5458 **0.0109**	0.029 0.0285 1.0179 0.3087	0.0784 0.0313 2.5006 **0.0124**

Table 15. Summary of Effects of Individual Belief 2 on Behavioral Intent (Effect/Standard Error/t-value/p-value).

Summary of Effects on Behavioral Intent (Effect / Standard Error / t-value / p-value).			
	total effect	direct effect	indirect effect
Attitude	0.6022 0.0433 13.9239 **<.0001**	0.6022 0.0433 13.9239 **<.0001**	0
Belief: Expense	-0.017 0.0493 -0.3442 0.7307	0	-0.017 0.0493 -0.3442 0.7307
Perceived Behavior Control	0.1896 0.0367 5.1635 **<.0001**	0.1896 0.0367 5.1635 **<.0001**	0
Subjective Norms	0.1732 0.0373 4.6432 **<.0001**	0.1732 0.0373 4.6432 **<.0001**	0
Altruism	0.0287 0.0294 0.9772 0.3285	0.0313 0.0284 1.1016 0.2706	-0.002592 0.007593 -0.3414 0.7328

Table 16. Summary of Effects of Individual Belief 2 on Behavioral Intent (Effect/Standard Error/t-value/p-value).

Summary of Effects on Behavioral Intent (Effect / Standard Error / t-value / p-value).			
	total effect	direct effect	indirect effect
Attitude	0.6067 0.043 14.1161 **<.0001**	0.6067 0.043 14.1161 **<.0001**	0
Belief: Encouragement	0.5345 0.0423 12.6411 **<.0001**	0	0.5345 0.0423 12.6411 **<.0001**
Perceived Behavior Control	0.1899 0.0368 5.1634 **<.0001**	0.1899 0.0368 5.1634 **<.0001**	0
Subjective Norms	0.1687 0.037 4.556 **<.0001**	0.1687 0.037 4.556 **<.0001**	0
Altruism	0.0931 0.0418 2.2286 **0.0258**	0.0293 0.0285 1.0256 0.3051	0.0638 0.0307 2.082 **0.0373**

Note that the effect of the single *Belief*: EFPs are more expensive than other products (Table 15) was not statistically significant (p = .7307); however, the effects of the other two single *Beliefs* (EFPs help the environment in some way, Table 13; and EFP purchase

is encouraged by those important, Table 16) were statistically significant (p = <.0001). All other results are consistent with the original path analysis except for the effects of *Altruism* on *Behavioral Intent*. In the analysis that included the single *Belief: EFPs are more expensive than other products,* Table 15, neither the direct nor the indirect effects on *Behavioral Intent* were statistically significant (p = .2707, p = .7328).

Additional Data Analysis

In addition to the above discussed response variables, demographic information was also collected from the participants. This demographic data includes *Current Relationship Status, US Region of Residence, Political Views, Ethnicity, Gender, Age, Household Income,* and *Level of Education*. The purpose of this additional analysis was to compare each of the response variables across each of the demographic variables to look for overall trends in green-product-purchasing behavior.

Summaries for each of the demographic variables (*Current Relationship Status, US Region of Residence, Political Views, Ethnicity, Gender, Age, Household Income, and Education*) were created. Then the response variables (*Subjective Norm, Attitude, Perceived Control, Beliefs, Altruism, and Behavioral Intent*) were compared across each of these demographic variables.

After running multiple analyses, it was determined that while there might not be many momentous differences in the response variables when compared across the demographic variables, there are a few interesting differences. However, for the most part, each demographic variable had no more than two response variables on which participants differed. For example, the current relationship status and ethnicity of a

participant were significantly related to only one response variable each (Perceived Control and Altruism, respectively). However, there were two demographic variables with significant differences in most of the response variables: *Gender* and *Political Views.*

For the response variables compared across gender, the females scored higher than the males for every response variable (even for those responses in which there was no statistically-significant difference between the females and the males). Thus females appear to have a more positive attitude toward green purchase behavior than males, and appear to have a stronger behavioral intent as related to green purchasing than males. Overall, there were four response variables where the females scored significantly higher than the males: *Subjective Norm, Attitude, Beliefs,* and *Behavioral Intent*. This may reflect some kind of general differences between males and females in green purchase behavior.

The following figures show the significant differences between *Gender* and four of the six the response variables (excluding *Altruism* and *Perceived Control*). The p-values indicate that there was a significant difference in the means across gender.

Significant Differences for Subjective Norm

Gender

Overall p-value: 0.0115

Gender	Count	Mean	SD
Female	164	5.27	1.34
Male	147	4.89	1.35
Level	**-Level**	**Mean Difference**	**p-value**
Female	Male	0.37	0.0115

Table 17. Specific p-values for Subjective Norm across Gender.

Significant Differences for Attitude

Gender

Overall p-value: 0.0017

Gender	Count	Mean	SD
Female	164	5.61	1.32
Male	147	5.09	1.51
Level	**-Level**	**Mean Difference**	**p-value**
Female	Male	0.52	0.0017

Table 18. Specific p-values for Attitude across Gender.

Significant Differences for Beliefs

Gender

Overall p-value: 0.0037

Gender	Count	Mean	SD
Female	164	5.20	0.89
Male	147	4.84	1.10
Level	**-Level**	**Mean Difference**	**p-value**
Female	Male	0.36	0.0037

Table 19. Specific p-values for Beliefs across Gender.

Significant Differences for Behavioral Intent

Gender

Overall p-value: 0.0258

Gender	Count	Mean	SD
Female	164	5.66	1.46
Male	147	5.22	1.73
Level	**-Level**	**Mean Difference**	**p-value**
Female	Male	0.44	0.0258

Table 20. Specific p-values for Altruism across Gender.

Comparing across the participants' political views yields a significant difference in every response variable except for *Altruism*. Interestingly, there was a general trend in each of the response variables (except *Altruism*) when compared across *Political Views*. Though not always true, Very Conservative and Conservative participants generally

scored lower than Moderate participants, who generally scored lower than Liberal and Very Liberal participants for each response variable. Often, these differences were statistically significant. This might indicate some kind of difference in political attitudes toward intent to purchase green products.

The next set of tables show the significant differences between *Political View* and five of six the response variables (*Altruism* excluded). The p-values indicate that there was a significant difference in the mean across political views. Note that only the statistically significant pairwise differences are shown. If a pair is not shown in this table (e.g., there is no row comparing Liberal to Very Liberal), then the average scores for that pair were not statistically different from each other.

Significant Differences for Subjective Norm

Political Views

Overall p-value: 0.0006

Political Views	Count	Mean	SD
Very Conservative	21	4.46	1.59
Conservative	60	4.65	1.21
Moderate	105	5.09	1.38
Liberal	64	5.40	1.27
Very Liberal	36	5.66	1.27
Other	22	5.14	1.28
Level	**-Level**	**Mean Difference**	**p-value**
Liberal	Conservative	0.75	0.0005
Very Liberal	Conservative	1.01	0.0002
Very Liberal	Moderate	0.57	0.0295
Very Liberal	Very Conservative	1.2	0.0052
Liberal	Very Conservative	0.94	00067

Table 21. Specific p-values for Subjective Norm across Political Views.

Significant Differences for Attitude

Political Views

Overall p-value: <0.0001

Political Views	Count	Mean	SD
Very Conservative	21	4.06	2.08
Conservative	60	4.84	1.31
Moderate	105	5.42	1.38
Liberal	64	5.94	1.00
Very Liberal	36	5.96	1.09
Other	22	5.20	1.44
Level	**-Level**	**Mean Difference**	**p-value**
Liberal	Conservative	1.10	<0.0001
Very Liberal	Conservative	1.12	<0.0001
Moderate	Conservative	0.59	0.0027
Very Liberal	Moderate	0.53	0.0429
Very Liberal	Very Conservative	1.90	0.0007
Very Liberal	Other	0.76	0.0479
Liberal	Other	0.74	0.0456
Liberal	Moderate	0.51	0.0303
Liberal	Very Conservative	1.88	0.0003
Moderate	Very Conservative	1.37	0.0059

Table 22. Specific p-values for Attitude across Political Views.

Significant Differences for Perceived Control

Political Views

Overall p-value: 0.0009

Political Views	Count	Mean	SD
Very Conservative	21	4.58	1.02
Conservative	60	4.52	0.98
Moderate	105	5.02	1.01
Liberal	64	5.15	0.77
Very Liberal	36	5.08	0.85
Other	22	4.73	1.08
Level	**-Level**	**Mean Difference**	**p-value**
Liberal	Conservative	0.63	0.0001
Moderate	Conservative	0.60	0.0015
Very Liberal	Conservative	0.56	0.0039
Liberal	Other	0.42	0.0482
Liberal	Very Conservative	0.57	0.0154

Table 23. Specific p-values for Attitude across Political Views.

Significant Differences for Beliefs

Political Views

Overall p-value: <0.0001

Political Views	Count	Mean	SD
Very Conservative	21	4.02	1.29
Conservative	60	4.80	0.99
Moderate	105	5.06	1.00
Liberal	64	5.44	0.75
Very Liberal	36	5.30	0.85
Other	22	4.89	0.87
Level	**-Level**	**Mean Difference**	**p-value**
Liberal	Conservative	0.64	0.0003
Very Liberal	Very Conservative	1.28	0.0003
Very Liberal	Conservative	0.5	0.0157
Very Liberal	Other	0.41	0.0482
Conservative	Very Conservative	0.78	0.0166
Liberal	Other	0.55	0.0025
Liberal	Moderate	0.38	0.0091
Liberal	Very Conservative	1.42	<0.0001
Moderate	Very Conservative	1.04	0.0010

Table 24. Specific p-values for Beliefs across Political Views.

Significant Differences for Behavioral Intent

Political Views

Overall p-value: <0.0001

Political Views	Count	Mean	SD
Very Conservative	21	4.52	2.19
Conservative	60	4.80	1.61
Moderate	105	5.44	1.57
Liberal	64	6.01	1.24
Very Liberal	36	6.22	1.23
Other	22	5.45	1.34
Level	**-Level**	**Mean Difference**	**p-value**
Liberal	Conservative	1.21	<0.0001
Very Liberal	Conservative	1.42	<0.0001
Very Liberal	Moderate	0.78	0.0038
Moderate	Conservative	0.64	0.0064
Very Liberal	Very Conservative	1.7	0.0018
Very Liberal	Other	0.77	0.0214
Liberal	Very Conservative	1.49	0.0043
Liberal	Moderate	0.57	0.0181

Table 25. Specific p-values for Behavioral Intent across Political Views.

As the demographic variables *Gender* and *Political Views* each had significant differences for many of the response variables, it is likely that green purchase behavior is strongly tied to these two demographic variables.

CHAPTER V: CONCLUSION: DISCUSSION, IMPLICATIONS & LIMITATIONS

The purpose of this research study was to explore and further understand the effects of pro-social marketing, or the incorporation of social issues into product advertising. More specifically, this project was an investigation of the potential of altruistic values and beliefs about environmentally friendly products and their impact on green purchase behavioral intent.

Two research questions and eight hypotheses were addressed and tested in this research. Discussion, implications and limitations follow.

Elicitation Study Discussion

Stage one of this research project, the elicitation study, addressed the two research questions: What are the salient beliefs regarding purchasing environmentally friendly products? And, when it comes to everyday buying behaviors, what role does altruism play? Several beliefs were identified including that EFPs are better for the environment than non EFPs, more expensive than non EFPs, better for personal health, better for future generations, the purchase makes them feel better about themselves, EFPs are not effective products, and EFPs are not convenient to purchase. The strongest beliefs about EFPs and those examined further in the main survey were that EFPs are better for the environment, and that EFPs are expensive. This leads to the following implications:

Implications of the Elicitation Study

The elicitation study revealed several practical implications. First, marketers of EFPs need to be more aware of pricing—perceived and actual—as it is a major factor (price of EFPs is perceived as expensive and thus as a disadvantage) in the purchasing process of EFPs.

Second, marketers of EFPs could begin, or continue to, focus on the impact the purchase of EFPs has on the environment (vs. the purchase of non-EFPs). The sample of participants in the elicitation study view this benefit as the most valuable when considering EFP purchases. Marketing communication could focus on this message.

Finally, marketers of EFPs should evaluate the effectiveness of their products as compared to non-EFPs. Environmentally friendly products need to deliver on their promises to work as well as if not better than their non-EFP counterparts. Marketing communication could focus on this message and the effectiveness of their products as well.

Main Study Discussion

The main study addressed eight research hypotheses:

H_1: Altruism predicts beliefs toward green purchase behavior intent.

H_2: Beliefs predict attitudes toward green purchase behavior intent.

H_3: Beliefs predict subjective norms regarding green purchase behavior intent.

H_4: Beliefs predict perceived behavior control regarding green purchase behavior intent.

H_5: Attitudes toward green purchase behavior predict behavioral intent to purchase environmentally friendly products.

H_6: Subjective norms regarding green purchase behavior predict behavioral intent to purchase environmentally friendly products.

H_7: Perceived behavior control regarding green purchase behavior predicts behavioral intent to purchase environmentally friendly products.

H_8: Altruism predicts green purchase behavior intent.

The first seven hypotheses were supported, however the eighth hypothesis found partial support. The main study also supports the Theory of Planned Behavior as applied to purchasing decisions related to environmentally friendly products. There are strong

relationships between the studied variables, *Attitude*, *Subjective Norms* and *Perceived Behavior Control* with *Behavioral Intent*. These variables also appear to appear to affect *Behavioral Intent*.

When it comes to the role of *Beliefs* in green purchase behavior/behavioral intent, this study shows that *Beliefs* about environmentally friendly products play a significant role, and have a statistically significant effect, on green purchase behavioral intent. In addition, *Attitude* toward green purchase behavior has a stronger relationship with green purchase *Behavioral Intent* than do *Subjective Norms* and perceived *Behavioral Control* (although all are strong positive correlations). The strength of the relationship between *Beliefs* and *Attitudes* is also worth pointing out, as it is the second strongest relationship among the six variables.

Although statistically significant, *Altruism* was found to have a weak relationship with all of the other variables, and was also found to be a weak predictor (indirectly only) of green purchase *Behavioral Intent*. This is an interesting finding as in the elicitation study, the top advantage to purchasing EFPs reported by participants was that they would be helping the environment—which would be considered an altruistic motive. Thus the main study does fall in line with the elicitation study as altruism was found to have statistical significant relationships with all of the other variables and is also a statistically significant indirect predictor of behavioral intent, however, the magnitude of these findings is questionable.

What this means is that consumer beliefs regarding environmentally friendly products (EFPs) are influential in their decision-making processes related to green products. This research also shows that *Attitude* toward green purchase behavior is more

influential than *Subjective Norm* and perceived *Behavior Control* when it comes to green purchase *Behavioral Intent*.

When the specific belief items were analyzed individually and in more detail, it was found that two of the beliefs (EFPs help the environment in some way, and EFP purchase is encouraged by those important) are statistically significant predictors of green purchase *behavioral intent*, however the third belief (EFPs are more expensive than other products) was not found to have a statistically significant effect and is thus not a strong predictor of *behavioral intent*.

Implications of the Main Study

The findings in this study are adjacent to prior research that supports the Theory of Planned Behavior in predicting consumer behavior. As expected, attitudes, subjective norms and perceived behavior control predicted intentions to purchase environmentally friendly products. The addition of beliefs and altruism into the theoretical model, and thus the study, show the direct and indirect impact that additional variables (beliefs and altruism) can play when one considers purchasing EFPs.

This research contributes to the growing literature on TPB, specifically that which looks at the "green consumer." In addition, this study reaches beyond previous research in multiple ways. First, it examines thoughts about advertising and consumer behavior related to a social issue: sustainability. Second, it considers the role values, specifically altruism, play in everyday purchasing decisions.

This study also contributes to advertising scholarship in two ways. First, it attempts to incorporate a value structure into a previously established behavioral theory (TPB). Also, because this study is uniquely different from traditional advertising, social

marketing, public relations and corporate image research, this study has the potential to advance the scholarship on social effects and social motivations of advertising and consumers respectively.

In addition to theoretical implications, this research presents some additional practical implications that those in the fields of advertising, marketing and communications may find useful. First, marketers of EFPs should focus their marketing communication messages on beliefs about EFPs, as belief-related messages (such as messages regarding price, environmental impact, and effectiveness of the products) may have a strong impact on consumers' green purchase behavioral intent.

Second, although subjective norms and perceived control also effect green purchase behavioral intent, marketers of EFPs should consider focusing their marketing communication messages on attitudes toward EFPs as attitude has the strongest relationship with behavioral intent. Attitude-related messages, such as those pointing out that purchasing EFPs is worthwhile, enjoyable or good, will most likely have a strong positive impact on consumers' green purchase behavioral intent.

Lastly, this research shows that two demographic variables may be of special interest to advertisers and marketing communication professionals: gender and political affiliation. Female consumers and consumers who tend to have somewhat liberal views appear to have more positive responses to environmentally friendly products than their counterparts.

Limitations

As with all research, this study has potential limitations. Survey methodology includes collecting self-reported data, and there is the potential that the data collected and

thus analyzed are exaggerated or influenced by various participant biases. Both the elicitation study and the main study relied on self-reported data. Also, since one researcher analyzed the data, there is the potential for researcher bias in the analysis of the qualitative elicitation study data. Lastly, the elicitation survey questions and the main survey questions were not formally tested for clarity and understanding, thus there is a chance that the questions were not interpreted as intended, and thus the participant responses could potentially be misguided.

Lastly, this research assessed behavioral intent rather than behavior. Although most research that supports the Theory of Planned Behavior measures intent rather than behavior itself, future research could aim at measuring behavior itself.

Further Research

In addition to obtaining measures of behavior, future research on altruism and green consumer behavior could focus on additional and/or different potential belief or value variables. Perhaps altruism is not the right scale or term to use –there may be a disconnect between helping others and helping the environment—some consumers may perceive helping the environment as helping themselves (improved personal health), rather than helping others (aiding in the creation of a sustainable world for future generations). Making this distinction or clarifying the differences between self help, other help and/or environmental help may improve understanding of green consumers and the role their beliefs play in relation to green purchase behavior.

Lastly, due to the findings related to demographic subgroups of participants, future research could also further examine the relationships between demographic variables (specifically *Gender* and *Political View*) and green purchase behavior. Future

research could also identify additional demographic variables, not examined in this study that might be strongly associated with green purchase behavior.

Overall Conclusion

This study was about altruism and its potential link to the purchase of environmentally friendly products. It sought answers to the question, "Why do people buy environmentally friendly products?" Altruism was investigated as a predictor of green behavioral intent, as were beliefs, attitude, social norm and perceived behavior control.

In regards to altruism, what this study displayed is that altruism is not a direct predictor of green purchase behavioral intent, however it was shown to be an indirect predictor. This could be explained in different ways, first, buying products for oneself (light bulbs, a car, building materials, organic foods, etc.) may not necessarily be considered an altruistic act, even when the product of choice is environmentally friendly. Thus the underlying motivation for purchase, because it is a purchase for one-self, begins as a self-serving act rather than an other-serving, or altruistic, act. In turn, no matter what the product, altruism may not be the primary driving force behind the purchase of personal everyday product. That could explain why there is not a direct link between altruism and green purchase behavior. Perhaps we need to look beyond the traditional human-centric definition of altruism.

Second, multiple factors go into purchase decisions. Altruism was indirectly shown to play a role in the decision making process of purchasing environmentally friendly products; however, beliefs such as helping the environment, product price and encouragement from others, contribute to the decision making process, as do attitudes,

social norms and perceived behavior control. Altruism alone does not predict green purchase behavioral intent, however it cannot be ruled out as an influential force in the process of purchasing environmentally friendly products.

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